

REMARKS

Claims 1, 3, 4 and 6-20 were previously pending in the application. By the present supplemental amendment, claims 3, 4, 6-8, 10-14 and 16-20 are canceled and new claims 21-35 are added. New claim 21 is an independent claim and new claims 22-35 correspond to original claims 2-8, 10-14 and 16-17. Therefore, independent claims 1, 9, 15 and 21 are presented together with dependent claims 22-35, which depend from claim 21.

Claims 1-17 are believed patentable over KATSUKI et al. 5,581,767 for the reasons presented in the amendment of June 8, 2006 and reproduced below.

Claim 1 is amended and recites that the plurality of state control units comprises at least four state control units that are directly interconnected to each other by the event distributing means.

By way of example, as seen in Figure 2 of the present application, reproduced below, each of four state control units S101 are directly interconnected to each other by dedicated event communication lines 145.

Fig. 2

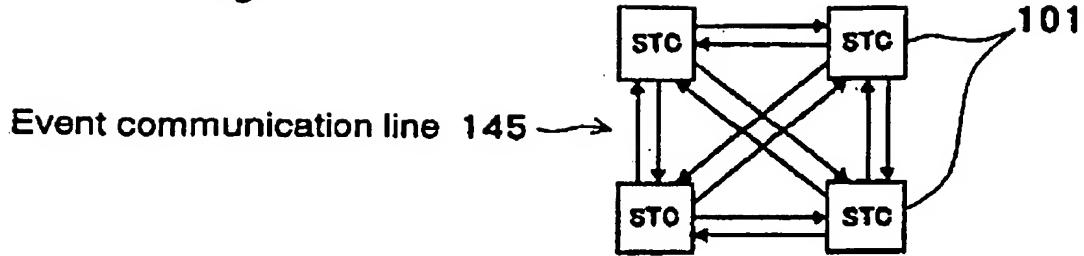


Figure 2 of KATSUKI, reproduced below, shows control unit 22 connected to other control units in an immediately adjacent row or an immediately adjacent column.

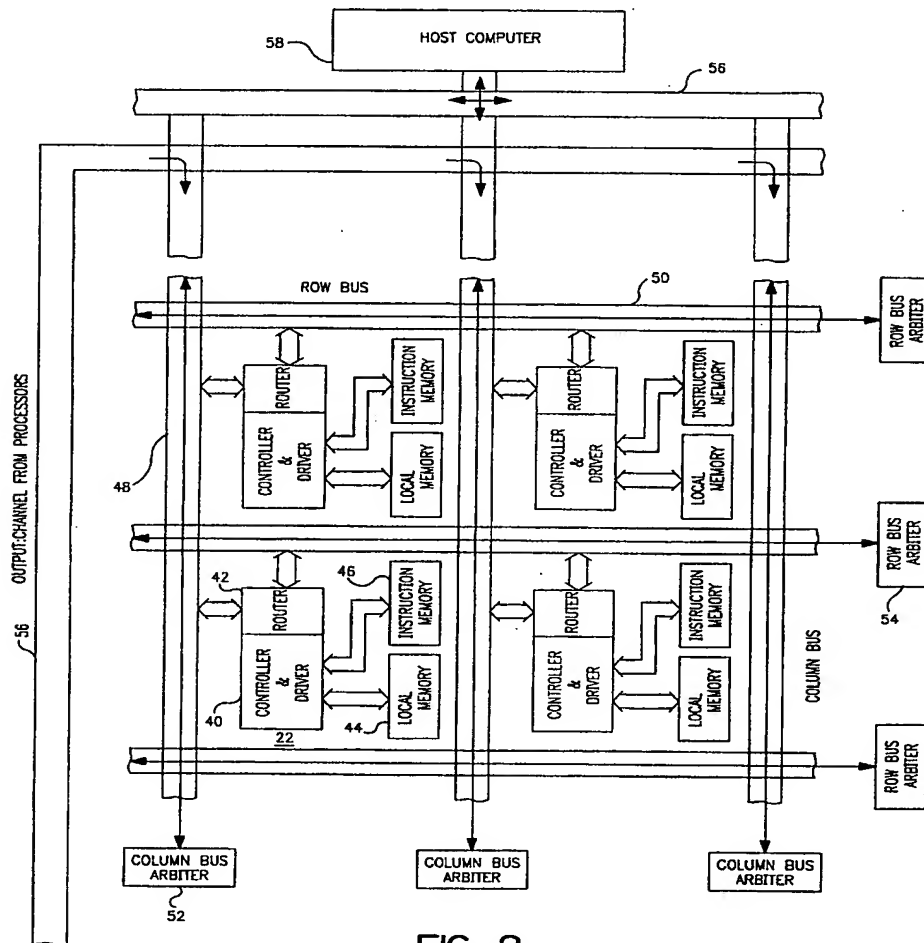


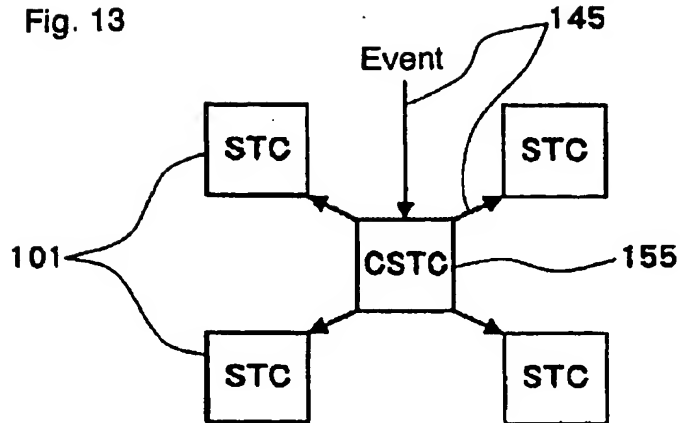
FIG. 2

However, there is no direct interconnection between controllers 22 in an adjacent column that are not in the same row. Rather, in KATSUKI, controllers 22 that are on different rows are connected by both a column bus and a row bus, so that data is first applied to a column bus line and then switched to a row line. See column 12, lines 29-33.

As the reference does not disclose that which is recited, the anticipation rejection is not viable. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 9 is rewritten in independent form and recites that a central control unit is provided for distributing event data to a plurality of state control units. The central control unit is surrounded by the plurality of control units.

By way of example, Figure 13 of the present application, reproduced below, shows central control unit 155 surrounded by a plurality of state control units 101.



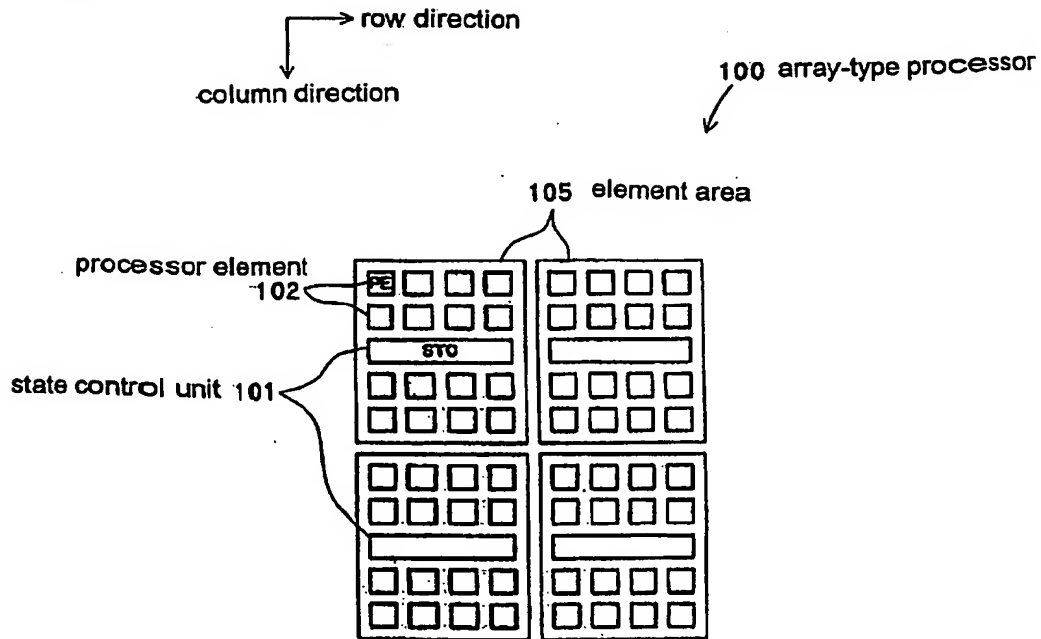
Referring again to Figure 2 of KATSUKI (reproduced above), host computer 58 (noted in the Official Action as a central control unit) is not surrounded by a plurality of state control units as recited.

As the reference does not disclose that which is recited, the anticipation rejection is not viable as to claim 9.

Claim 15 is rewritten in independent form and recites that the multiplicity of processor elements are divided into element areas so that there is a state control unit for each element area and there is one state control unit for a plurality of processor elements.

By way of example, as seen in Figure 3 of the present application, reproduced below, there are sixteen processor elements 102 per element area 105 and one state control unit 101 that is connected to the processor elements of a respective element area 105.

Fig. 3



As set forth in the Official Action, KATSUKI at column 6, lines 32-35 disclose a one-to-one correspondence between processor units and control units.

As the reference does not disclose that which is recited, the anticipation rejection as to claim 15 is not viable.

New claim 21 is believed to define over KATSUKI for the following reasons.

KATSUKI discloses only a bus structure for a multiprocessor system which interconnects elements of a control/memory section and elements of a processor section corresponding one-to-one to the control/memory section via optical channels. As KATSUKI is interested in the bus structure,

KATSUKI does not elaborate on the operations of the control/memory section and the processor section. KATSUKI discloses that instructions and data from a multiprocessor are transferred to control/memory unit 22. However, KATSUKI does not disclose how event data is supplied.

In contrast, new claim 21 is directed to an array-type processor that operates by causing transitions of operating states of the array-type processor. A state control unit manages these operating states. Each processor element can supply event data which can determine transitions of the operating states. Accordingly, new claim 21 relates to the event data and how the array-type processor includes an event distributing means for distributing the event data.

At least the following four features that are recited in claim 21 are believed to distinguish over KATSUKI. The array-type processor of claim 21 includes:

1. A state control means that causes successive transitions of operating states in accordance with transition rules of a transition table memory, the state control means successively switches instruction codes of a multiplicity of processor elements in accordance with the operating states;

2. Transitions of the operating states are done by a state control unit in accordance with a computer program that has been installed in advance and in accordance with event data which are supplied by the multiplicity of processor elements;

3. The multiplicity of the processor elements is divided into a number of element areas corresponding to the number of plurality of state control units; and

4. Each of the plurality of state control units is connected to the processor elements corresponding to each of the plurality of state control units within respective element areas.

As KATSUKI does not disclose these features, new claim 21 is believed to define over KATSUKI.

Support for new claim 21 can be found on page 1, lines 3-9, page 3, lines 9-12, page 7, line 17 to page 8, line 6 and page 10, lines 11-25.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Please charge the fee of \$200 for one extra independent claim added herewith to Deposit Account No. 25-0120.



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The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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